

Memo

To: Adam Crutcher, City of Ketchum

From: Jennifer Zung, PE, CFM

CC:

Date: 4/5/2023

Re: 121 Badger Lane Floodplain Development Permit, Ketchum, ID (P23-014)



Per your request, I have reviewed the 121 Badger Lane Floodplain Development Permit support materials (permit No. P23-014) prepared by Brockway Engineering PLLC dated February 27, 2023, and the associated building permit drawings. These were reviewed with respect to the City of Ketchum municipal code Chapter 17.88, Article 1. Flood Damage Prevention as well as guidance and standards of the National Flood Insurance Program (NFIP).

Grading

1. The narrative states that the culvert from the north has an upstream invert elevation of 5784' but the grading plan (L2.0) and the existing topo survey (TOPO) shows the existing ground at an elevation of 5786'. It appears that excavating to an elevation of 5784' may require grading into the property to the north. Please verify the proposed grading and culvert capacity.
2. The narrative states that the culvert from the west has an upstream invert elevation of 5783.3' but the grading plan (L2.0) and the existing topo survey (TOPO) shows the existing ground at an elevation of approximately 5784.3'. Please verify the proposed grading and culvert capacity.
3. Cut/fill is stated to only include areas within the SFHA and that the area removed with the LOMA was excluded from the analysis. However, there are several locations within the LOMA area that are below the BFE with the most notable area on the west side where the ground drops 2-ft below the BFE. Please include the entire site in the cut/fill analysis and provide a cut/fill plan that shows either +/- ticks or relative elevation banding. A cut/fill plan will be much easier to review than the pages of data provided in Appendix C.

Hydraulic Analysis

1. The cross sections added to the HEC-RAS model through the project site should be placed perpendicular to the general overbank flow direction, which is parallel to the BFE lines shown

in Figure 3. Also, with the cross sections placed on the property lines only the middle cross section (100706) reflects the proposed project. Please correct the orientation of the cross sections and place them to represent more of the project.

2. Please provide the HEC-RAS model files to assist with review of the input and output.

Elevation Certificate

Please complete/correct the following sections in the Elevation Certificate

1. General - anything that is not applicable, add N/A to the field instead of leaving it blank.
2. A7. Correct to building type 1B since the slab is elevated above surrounding grades.
3. 5A. Select the horizontal datum. Longitude should be -114.37573. Remove “N” and “W” from the Lat and Long values. Verify the Lat Long given is for the center front of the building.
4. B7. Add the FIRM Panel Effective Date
5. B10. The BFE should be obtained from the Flood Insurance Study (FIS) profile since this is a detailed study area. Remove the note from B9. that the BFE is from the FIRM profile as there are no profiles on the FIRM and the BFE lines on the FIRM should not be used. Verify the BFE is from the flood profiles in the FIS (an exhibit showing how this was determined from the FIS profile would be helpful).
6. B11. Indicate the vertical datum is NAVD88 per the topographic survey and the FIS.
7. C2f. Confirm the LAG is 5786.2-ft. Note this is below the BFE.
8. C2g. Confirm the HAG is 5787.0-ft. Per the grading plan it appears it would be 5888.5-ft as it should include adjacent patios.
9. The Elevation Certificate needs to be signed and stamped by an Idaho licensed engineer or land surveyor.

From: Jen Zung <jen.zung@harmonydesigninc.com>
Sent: Sunday, June 4, 2023 3:47 PM
To: Adam Crutcher <ACrutcher@ketchumidaho.org>; Marc Budsberg <marc.budsberg@harmonydesigninc.com>
Subject: RE: 121 Badger Lane | Building Permit Application Submittal

Hi Adam,

Sorry I realized I didn't respond to this earlier. Yes, I reviewed all the materials submitted and all of our comments have been addressed. For the items below, I would agree with the applicants' responses to these criteria and that they are met generally due to the proposed grading including more excavation than fill and culverts being placed under the driveway to convey flows in drainage patterns similar to historic.

Thanks,
Jen

Jennifer Zung, PE, CFM
Principal Engineer

 208.354.1331 Ext 4003  jen.zung@harmonydesigninc.com

From: Adam Crutcher <ACrutcher@ketchumidaho.org>
Sent: Friday, May 19, 2023 10:38 AM
To: Jen Zung <jen.zung@harmonydesigninc.com>; Marc Budsberg <marc.budsberg@harmonydesigninc.com>
Subject: RE: 121 Badger Lane | Building Permit Application Submittal

Hello Jen & Marc,

Hope you are enjoying the warming weather.

I'm wrapping up my review of the resubmittals for 121 Badger Ln and will probably finish up any comments I have early next week. Have you gotten all the material you needed to address your comments for the second round of review? If not, when I submit my second round of comments I can forward on any requests you have.

In looking at our criteria for evaluating these floodplain development permit applications, I feel confident in addressing most of them but three of the criteria, which I've listed below, I was hoping to get your opinion on if you believe the project meets. When you wrap up your review, of the resubmittals, could you let me know how the project either does or doesn't meet these criteria and why?

1. The proposal preserves or restores the inherent natural characteristics of the river, floodplain, and riparian zone, including riparian vegetation and wildlife habitat. Development does not alter river channel unless all stream alteration criteria for evaluation are also met.

5. Landscaping and driveway plans to accommodate the function of the floodplain allow for sheet flooding. Surface drainage is controlled and shall not adversely impact adjacent properties including driveways drained away from paved roadways. Culvert(s) under driveways may be required. Landscaping berms shall be designed to not dam or otherwise obstruct floodwaters or divert same onto roads or other public pathways.

6. Floodwater carrying capacity is not diminished by the proposal.

Thanks

ADAM CRUTCHER | CITY OF KETCHUM

PLANNING AND BUILDING | ASSOCIATE PLANNER

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From: Adam Crutcher

Sent: Thursday, May 11, 2023 10:10 AM

To: Jen Zung <jen.zung@harmonydesigninc.com>; Marc Budsberg <marc.budsberg@harmonydesigninc.com>

Subject: FW: 121 Badger Lane | Building Permit Application Submittal

Hi Jen & Marc,

We received resubmittals for the 121 Badger Ln project seen in the email below. If you have any questions or don't see information which you requested, let me know.

Our upcoming forecast shows the early part of next week getting into the mid 70's so I'm letting the applicant know that my review might take some additional time depending on how much flooding we get.

Thanks

ADAM CRUTCHER | CITY OF KETCHUM

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